Remarks

Claims 25-74 are pending in the instant application upon entry of the instant amendment. Claims 1-24 have been canceled without prejudice or disclaimer. Applicants reserve the right to pursue the canceled subject matter in one or more continuing applications. Claims 29, 34-35, 37, 42, 44, 49, 51, 56, 58, 62-63, 65-66, 68 and 70-73 have been amended to more clearly define the claimed subject matter. Support for the amended claims can be found throughout the specification as filed. In particular, support for claims 35, 42, 49, 56, 63, 68 and 73 can be found at page 199 and Example 23 of the specification as filed. Thus, no new matter has been added.

I. Fees for Pending Claims

Applicants note that the Fee Transmittal Sheet submitted October 15, 2002 appears to have incorrectly listed the number of total and independent claims pending. At the time, claims 1, 13, 17-19, 22-24 and 25-74 were pending - 58 total claims, with 10 independent claims (claims 1, 22, 25, 31, 37, 44, 51, 58, 65, and 70). However, the Fee Transmittal Sheet listed only 50 total and 8 independent claims. Applicants cannot determine the amount actually charged by the Office to Applicants' deposit account for the pending claims; please charge our Deposit Account 08-3425 for any prior underpayment.

II. Election

The Examiner has noted that the election in Paper No. 5 has been treated as an election without traverse. *See* Paper 7, page 2, section 2.

Applicants respectfully disagree with the Examiner in treating the election as an election without traverse. First, Applicants had indicated in their Response to the Restriction Requirement that the provisional election to the claimed polypeptide sequence was made with traverse. *See* Paper No. 5, page 8 (emphasis added). Furthermore, in compliance with 37 C.F.R. § 1.111 and M.P.E.P § 818, Applicants had specifically pointed out the errors in the Examiner's requirement for restriction. For instance, Applicants argued that it would not entail a serious burden to search the inventions in a single application since the searches for polynucleotides, polypeptides, antibodies, and methods of diagnosing and treating diseases of the claimed proteins would be overlapping. For example, Applicants previously argued that a

search of polynucleotide claims would provide useful information for examining claims directed to both polynucleotides and the polypeptides encoded by these polynucleotides. Similarly, a search of the polypeptide claims would clearly provide useful information for the examination of claims directed to antibodies either produced in response to or having affinity for the subject polypeptides. In response, the Examiner has simply dismissed the Applicants arguments as non-distinct and/or non-specific. Thus, Applicants respectfully request that the Examiner recognize that Applicants' election was elected **with** traverse.

III. Claims Withdrawn from Consideration

The Examiner has withdrawn claims 1-10, 13-15 and 17-24 from consideration, as these claims are allegedly drawn to a non-elected invention. Applicants respectfully point out that claims 1-10, 13-15 and 17-24 have been canceled.

IV. Claim Objections

A. Objection to Claim 16

The Examiner has objected to claim 16 as being of improper dependent form for allegedly failing to further limit the subject matter of a previous claim. *See* Paper 7, page 2, section 4.1. Specifically, claim 16 depends on claim 15, which is allegedly directed to a non-elected invention. Applicants have canceled claim 16, thus obviating the Examiner's objection. Applicants respectfully request reconsideration and withdrawal of the objection.

B. Objection to Claims 30, 36, 38, 39, 43, 45, 46, 50, 52, 53, 57, 59, 60, 64, 69 and 74

The Examiner has objected to claims 30, 36, 38-39, 43, 45-46, 50, 52-53, 57, 59-60, 64, 69 and 74 as being of improper dependent form for allegedly failing to further limit the subject matter of a previous claim. *See* Paper 7, page 3, section 4.2. More specifically, the Examiner alleges that the method of producing a protein in claims 30, 36, 43, 50, 57, 64, 69 and 74 does not further limit the protein and are thus improper dependent claims.

Applicants respectfully disagree and traverse.

Applicants respectfully point out that claims 30, 36, 43, 50, 57, 64, 69 and 74 are dependent, product-by-process claims. Product-by-process claims, which are product claims

that define the claimed product in terms of the process by which it is made, are proper. *See* M.P.E.P. § 2173.05(p). Although 37 C.F.R. § 1.75(c) requires the dependent claim to further limit a preceding claim, this rule does not apply to product-by-process claims. *See* M.P.E.P. § 608.01(n) at 600-76. In view of the above, Applicants submit that claims 30, 36, 43, 50, 57, 64, 69 and 74 are proper dependent claims. Applicants respectfully request that the Examiner reconsider and withdraw the objection to claims 30, 36, 43, 50, 57, 64, 69 and 74.

The Examiner further alleges that in claims 38-39, 45-46, 52-53, and 59-60, the recitation of an antibody capable of binding a protein in a Western blot or ELISA assay does not further limit the protein. Applicants respectfully disagree and assert that it is well known in the art that an antibody used in a Western blot binds a denatured form of a protein, whereas an antibody used in an ELISA binds a protein in its native conformation. Thus, the claims as written are proper dependent claims; these claims further limit the protein. In particular, they claim inherent limitations of the conformation of the protein, denatured or native. In light of the above argument, Applicants respectfully request reconsideration and withdrawal of the objection to claims 38-39, 45-46, 52-53, and 59-60.

C. Objection to Claim 11

The Examiner has objected to claim 11 as allegedly reciting an improper Markush Group. Applicants have canceled claim 11, therefore, the Examiner's objection is moot. Applicants respectfully request reconsideration and withdrawal of the objection.

V. Priority

The Examiner has requested that the current status of non-provisional parent application 09/591,316 be updated in the first sentence of the specification. As requested, Applicants have amended the specification to indicate that the current status of said application is "now abandoned."

VI. Claim Rejections Under 35 U.S.C. § 112, First Paragraph

A. Enablement of Claims 11, 12, 16 and 25-74

Claims 11, 12, 16 and 25-74 were rejected under 35 U.S.C. § 112, first paragraph. *See* Paper 7, page 4, section 6.1. In particular, it was asserted:

> The specification asserts that the gene encoding the polypeptide of SEQ ID NO:83 can be used for differential identification of the tissues or cell types present in a biological sample for diagnosis of diseases and conditions which include, but are not limited to, cancer of the reproductive systems. The specification states on page 66, line 1-2, 'This gene is expressed primarily in ovarian cancer, and to a lesser extent breast cancer and prostate tissue.' This is a specific and substantial utility. However, due to the brevity of the disclosure, it is not clear if the polypeptide could be used as an ovarian or breast cancer marker. Apart from the statement on page 66, there is no information on whether the protein is expressed in normal ovarian or breast tissue, if it is expressed differentially in prostate cancer compared to normal prostate tissue, or how many ovarian cancers or breast cancers express the polypeptide. In the paragraph bridging pages 66 and 67, the specification asserts that the tissue distribution and homology to LAK-4p indicates that polynucleotides and polypeptides corresponding to this gene are useful for the treatment and diagnosis of developing and growing systems, and cancers, and that the protein and antibodies directed against the protein may show utility as a tumor markers and/or immunotherapy targets. However, due to the lack of guidance, the specification is not enabling for the use of the polypeptide or polynucleotide for these uses.

See Paper No. 7, page 4, line 20 to page 5, line 13. Thus, while the Examiner concedes that the Applicants have asserted a specific and substantial utility, the Examiner contends that such a use as a cancer diagnostic is not enabled by the specification since no data is disclosed as to the expression of the polypeptide in normal or cancerous tissue.

Applicants respectfully disagree and traverse.

Preliminarily, Applicants respectfully point out that claims 11, 12 and 16 have been canceled, thus rendering the rejection to claims 11, 12 and 16 moot. Applicants respectfully request withdrawal of the rejection to claims 11, 12 and 16.

Applicants respectfully submit that the proper legal standard for evaluating enablement, as cast by the C.C.P.A. and the Federal Circuit, is whether proteins encompassed by the claims have at least a single use, and this use can be confirmed, without undue experimentation, by following procedures either described in the specification or otherwise known in the art. *See In re Angstadt*, 190 U.S.P.Q. 214 (C.C.P.A. 1976). According to M.P.E.P. § 2164.01(b), "[a]s long as the specification discloses at least one method for making and using the claimed invention that bears a reasonable correlation to the entire scope

of the claim, then the enablement requirement is satisfied." *Citing In re Fisher*, 427 F.2d 833, 839 166 U.S.P.Q. 18, 24 (C.C.P.A. 1970).

Thus, Applicants submit that to be fully enabled, the present specification need only teach the skilled artisan to be able to use the claimed proteins as a diagnostic marker for cancers of the reproductive system (*e.g.*, ovarian cancer). Applicants respectfully note that the claimed invention, Gene No. 22, is primarily expressed in ovarian cancer. *See* page 66, line 1 of the specification. Therefore, the present invention can be used as a diagnostic marker for the presence of ovarian tumor. *See* page 66, lines 3-6 of the specification. Applicants respectfully assert that it would not require undue experimentation on the part of one of ordinary skill in the art to use the polypeptide of the present invention as a diagnostic marker for cancer. For example, the specification at page 66, lines 10-15, explicitly states (emphasis added):

> expression of this gene at significantly higher or lower levels may be routinely detected in certain tissues or cell types ... taken from an individual having such a disorder, relative to the standard gene expression level, *i.e.*, the expression level in healthy tissue or bodily fluid from an individual not having the disorder.

Thus, Applicants submit that the specification would allow one of ordinary skill in the art to use the polypeptide of the instant invention as a diagnostic marker for cancer, without undue experimentation, by comparing expression levels of the gene encoding the claimed polypeptide in diseased tissue (*e.g.*, cancerous ovarian tissue) relative to the levels from healthy, non-diseased tissue. Applicants respectfully reiterate that the specification clearly indicates that the gene encoding the polypeptide of SEQ ID NO:83 is expressed primarily in ovarian cancer (emphasis added). Applicants respectfully assert that based on a reasonable reading of "primarily," one of ordinary skill in the art would conclude that the gene encoding the polypeptide of SEQ ID NO:83 is overexpressed in cancerous ovarian tissue. Applicants point out that the word "primarily" as defined by several dictionaries means "principally" or "chiefly." *See*, for example, The American Heritage Dictionary, Second College Edition published by Houghton Mifflin Company. Thus, it is apparent from the specification that the claimed polypeptide would be expressed differentially in ovarian cancer compared to normal tissue, *i.e.*, higher levels of expression would be observed in ovarian cancer tissue relative to

normal healthy tissue. Therefore, one of ordinary skill in the art would be enabled to use the claimed polypeptides as a diagnostic marker for ovarian cancer.

In addition, the Examiner alleges: "[i]n order for a polypeptide or a polynucleotide to be useful as a cancer marker, some basic expression data must be disclosed." *See* Paper No. 7, page 5, lines 13-17 (emphasis added). The Examiner purports to support this position with a draft document entitled "Guidelines for Marker Development" by the National Cancer Institute (NCI) found on the NCI webpage (hereinafter, Draft Guidelines). This document is wholly inadequate to establish that one skilled in the art would conclude, under the law, that the claimed polypeptides are not useful or enabled as an ovarian cancer diagnostic. For instance, the draft document was prepared "to help evaluate whether markers or assays are ready for use in clinical settings." *See* page 1 of Draft Guidelines, first paragraph. Applicants respectfully point out that "ready for use in a clinical setting" is not the standard required for patentability under 35 U.S.C. §§ 101 or 112. For example, the Federal Circuit has held (emphasis added):

> Usefulness in patent law, in particular in the context of pharmaceutical inventions, necessarily includes the expectation of further research and development. The stage at which an invention in this field becomes useful is well before it is ready to administered to humans.

In re Brana, 51 F.3d 1560 (Fed. Cir. 1995), *See also* M.P.E.P. § 2107 (III) at 2100-35. Therefore, the recently drafted guidelines promulgated by the NCI program to determine whether or not a marker is ready for use in the clinical setting does not reflect what a skilled artisan would conclude is a credible use under 35 U.S.C. § 101 or what is enabled under 35 U.S.C. § 112.

In addition, assuming *arguendo* that the Draft Guidelines are relevant in the inquiry of credible utility or enablement under the law, Applicants respectfully point out that the Draft Guidelines are merely a draft promulgated well after the priority date of the instant invention to "ensure that development of the next generation of laboratory tests is efficient and effective." (*See* Exhibit A (emphasis added)). Therefore, these guidelines do not reflect what the skilled artisan would find credible or enabling on December 17, 1998, the priority date of the present application. Moreover, the fact that the NCI felt the need to draft these guidelines, tends to suggest that skilled artisans often concluded that markers were credibly

useful and thus enabled well before large statistical studies were performed on a heterogenous population.

Applicants submit that the Examiner has failed to provide sufficient evidence pointing out the lack of enablement of the instant specification. A patent Applicant's specification disclosure that contains a teaching of how to make and use the invention must be taken as enabling unless the Patent Office provides sufficient reason to doubt the accuracy of the disclosure. *In re Marzocchi*, 439 F.2d. 220, 223-224, 169 U.S.P.Q. 367, 369-370 (C.C.P.A. 1971).

Therefore, in view of the foregoing, Applicants submit that the claims fully meet the enablement requirements of 35 U.S.C. § 112, first paragraph, and respectfully request that the rejection to claims 25-74 be reconsidered and withdrawn.

B. Written Description of Claims 31-36, 44-50, 58-64 and 70-74

The Examiner has rejected claims 31-36, 44-50, 58-64 and 70-74 under 35 U.S.C. § 112, first paragraph, and has requested an affidavit or declaration regarding the deposit made under the Budapest Treaty to remedy the alleged deficiency. *See* Paper No. 7, page 6, section 6.2.

Applicants respectfully point out that the specification, as set forth in 37 C.F.R. § 1.809 (d), clearly describes at page 4, line 23 to page 5, line 5 and page 129, Table 1, row 6 that the HPRBF19 cDNA contained in ATCC Deposit No. 203517 was deposited at the ATCC on December 10, 1998. The specification clearly discloses that ATCC Deposit No. 203517 has been deposited under the terms of the Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure with the following International Depository Authority: American Type Culture Collection (ATCC), 10801 University Blvd., Manassas, Virginia 20110-2209, U.S.A. (*See* page 4, line 23 to page 5, line 5). The Applicants respectfully submit that the specification is in compliance with 37 C.F.R. §§ 1.801-1.809.

Nevertheless, Applicants submit herewith the requested declaration regarding availability of the deposit made in connection with the present application under the Budapest Treaty.

As attorney for the above-identified Applicants in the above-identified patent application, I hereby declare and state that:

1. ATCC Deposit No. 203517 containing DNA Plasmid No. PS-101 was deposited with the American Type Culture Collection (ATCC), now located at 10801 University Boulevard, Manassas, VA 20110-2209, U.S.A. on December 10, 1998, in compliance with the provisions of the Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure.

2. I hereby assure the United States Patent and Trademark Office and the public that (a) all restrictions on the availability to the public of a sample of the above-mentioned deposited plasmid will be irrevocably removed upon issuance of a United States patent of which the plasmid(s) is a subject; (b) the above-mentioned deposited plasmids will be maintained for a period of at least five years after the most recent request for the furnishing of a sample of the plasmid was received by the ATCC and, in any case for a period of at least 30 years after the date of deposit or for the enforceable life of such patent, whichever is longer; (c) should the above-mentioned deposited plasmid become non-viable or mutated or otherwise incapable of being furnished by the depository upon request due to the condition of the deposit, the plasmid will be replaced by the Applicants; and (d) access to the above-mentioned deposited plasmid will be available to the Commissioner during the pendency of the patent application or to one determined by the Commissioner to be entitled to such plasmid under 37 C.F.R. § 1.14 and 35 U.S.C. § 122.

Applicants respectfully submit that ATCC Deposit No. 203517 is available to the public. Furthermore, the specification teaches one skilled in the art how to isolate the cDNA from the deposited sample. *See, e.g.,* Example 1 at pages 318-322. Thus, Applicants have adequately enabled one skilled in the art to make and use the claimed invention.

Applicants submit that the rejections under 35 U.S.C. § 112, first paragraph, have been obviated by the above declaration. Accordingly, Applicants respectfully request that this rejection be reconsidered and withdrawn for claims 31-36, 44-50, 58-64 and 70-74.

C. Written Description of Claims 11, 12, 16 and 37-74

Claims 11, 12, 16 and 37-74 were also rejected under 35 U.S.C. § 112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. *See* Paper No. 7, page 7, section 6.3. More particularly it was asserted that (emphasis added):

> The specification describes a polypeptide sequence consisting of SEQ ID NO:83, which has the activity of activating the GAS (gamma activating sequence) promoter element, and which may be useful as an ovarian or breast cancer marker. However, the claims as written include polypeptides comprising fragments and homologues, encompass polypeptides that vary substantially in length and also in amino acid composition. The instant disclosure of a single polypeptide, that of SEQ ID NO: 83 with the instantly disclosed specific activities, does not adequately support the scope of the claimed genus, which encompasses a substantial variety of subgenera.

See Paper No. 7, page 7, lines 7-14.

Applicants respectfully disagree and traverse.

Preliminarily, Applicants respectfully point out that claims 11, 12 and 16 have been canceled without prejudice or disclaimer, thereby rendering the rejection to claims 11, 12 and 16 moot. Applicants respectfully request withdrawal of the rejection as applied to claims 11, 12 and 16.

In addition, Applicants have amended claims 65-66 and 70-71 to recite the phrase "consisting of" rather than "comprising." Applicants also point out to the Examiner that pending claims 37-64 recite polypeptides consisting of variants with a functional limitation. Thus, Applicants respectfully assert that claims 37-74 fully meet the written description requirement of 35 U.S.C. § 112, first paragraph.

Indeed, the test for the written description requirement is whether one skilled in the art could reasonably conclude that the inventor has possession of the claimed invention in the specification as filed. *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563, 19 U.S.P.Q.2d 1111, 1116 (Fed. Cir. 1991); M.P.E.P. § 2163.02.

The Federal Circuit recently re-emphasized the well-settled principle of law that "[t]he written description requirement does not require the applicant 'to describe exactly the

subject matter claimed, [instead] the description must clearly allow persons of ordinary skill in the art to recognize that [they] invented what is claimed,'" *Union Oil Co. v. Atlantic Richfield Co.*, 208 F.3d 989, 54 U.S.P.Q.2d 1227 (Fed. Cir. 2000), hereinafter referred to as "*Unocal.*" While the applicant must "blaze marks on trees," rather than "simply [provide] the public with a forest of trees," an Applicant is not required to explicitly describe each of the trees in the forest. *See Unocal*, 208 F.3d at 1000. *See also* M.P.E.P. § 2163.02 ("The subject matter of the claim need not be described literally (*i.e.*, using the same terms or *in haec verba*) in order for the disclosure to satisfy the description requirement."). The Court emphasized the importance of what the person of ordinary skill in the art would understand from reading the specification, rather than whether the specific embodiments had been explicitly described or exemplified. Indeed, as the court noted, "the issue is whether one of skill in the art could derive the claimed ranges from the patent's disclosure." *Unocal*, 208 F.3d at 1001 (emphasis added).

In an analysis of written description under 35 U.S.C. § 112, first paragraph, the Examiner bears the initial burden of presenting a *prima facie* case of unpatentability. This burden is discharged if the Examiner can present evidence or reasons why one skilled in the art would *not* reasonably conclude that Applicants possessed the subject matter as of the priority date of the present application. *In re Wertheim*, 541 F.2d 257, 262, 191 USPQ2d 90, 96 (C.C.P.A. 1976); M.P.E.P. § 2163.04.

Applicants respectfully disagree with the Examiner and submit that one skilled in the art would reasonably conclude that Applicants had possession of the polypeptides encompassed by the rejected claims in the present application as filed. Applicants further submit that the Examiner has underestimated both the teaching of the present application and the level of skill in the art on the priority date of the present application.

Applicants recognize that the Examiner is in part relying on language regarding a "representative number" of a claimed genus set forth in *Regents of the University of California v. Eli Lilly & Co.*, (119 F.3d 1559, 1569, 43 U.S.P.Q.2d 1398, 1406 (Fed. Cir. 1997)) (hereinafter "*Eli Lilly*") and incorporated into the Guidelines for Examination of Patent Applications Under the 35 U.S.C. § 112, ¶ 1 "Written Description" Requirement ("Guidelines"), when reciting the procedures followed in analyzing whether the description requirement for each of the claims at issue is satisfied. However, even assuming, *arguendo*,

that the Guidelines comport with the law, the Guidelines also define a "representative number" as "an inverse function of the skill and knowledge of the art." (*See* Guidelines at Page 1106.) Applicants note that the level of skill in the art on the priority date of the present application was very high.

Furthermore, the central issue in *Eli Lilly* involved claims to all mammalian cDNAs encoding insulin, which were supported in the specification only by the nucleotide sequence for the rat insulin gene. The Federal Circuit found the claims to human insulin lacked written description because the claims defined only a result or function. The court held that a result or function will satisfy the written description requirement *only if* correlated to a description of structural features of the claimed invention. According to the court, a sufficient written description must allow the skilled artisan to "visualize or recognize the identity of the members of the genus." *Id.*

In addition, the court held in *Eli Lilly* that a description of a genus of cDNAs may be achieved by reciting a representative number of cDNAs, defined by nucleotide sequence, falling within the scope of the genus or by reciting structural features common to a substantial portion of the members of the genus. *Eli Lilly*, 119 F.3d 1559, 1569 (Fed. Cir. 1997). Therefore, it logically follows that claims to polypeptides encoded by cDNAs may also be satisfied by providing sequences of a representative number of polypeptides which fall within the scope of the genus *or* by providing a recitation of structural features common to a substantial portion of the members of the genus.

Applicants assert that, in the instant case, the second test set forth in *Eli Lilly* has been satisfied because Applicants' description of the reference polypeptide sequence, SEQ ID NO:83, provides one skilled in the art with the necessary structural features common to a substantial portion of the members of the genus. Applicants further point out that the recitation of the structural features of the reference protein is a recitation of the structural features common to the members of the claimed genus because the proteins included within the claimed genus will have at least 90% (or at least 95%) of the amino acids of their amino acid sequence primary structure in common to the reference polypeptide of SEQ ID NO:83. Indeed, nothing more than a basic knowledge of the genetic code and what is described in the specification would be required for the skilled artisan to identify every single one of the polypeptides that are 90% or 95% identical to the amino acid sequence of SEQ ID NO:83.

Clearly, such knowledge is well within what is expected of the skilled artisan. Therefore, in accord with *Eli Lilly,* the specification clearly conveys that Applicants were in possession of the claimed invention on the priority date of the instant application.

In view of the above, Applicants submit that the claims fully meet the written description requirements of 35 U.S.C. § 112, first paragraph, and respectfully request that the Examiner's rejection of claims 37-74 under 35 U.S.C. § 112, first paragraph, be reconsidered and withdrawn.

VII. Rejection of Claims Under 35 U.S.C. § 112, Second Paragraph

Claims 29, 35 and 37-64 were rejected under 35 U.S.C. § 112, second paragraph as allegedly being indefinite. *See* Paper No. 7, page 9, section 7.

A. Claims Reciting "Specifically Binds"

In regard to claims 37, 44, 51 and 58, the Examiner alleges that the claims are indefinite because they "recite the limitation 'specifically binds,' [and] it is not clear what this term means." *See* Paper No. 7, page 9, section 7.1.

Applicants respectfully disagree. However, solely to expedite prosecution, the claims have been amended in accordance with the Examiner's suggestion to delete the word "specifically." *See* Paper No. 7, page 9, lines 15-16. In view of this amendment, Applicants respectfully request the rejection of claims 37, 44, 51 and 58 under 35 U.S.C. § 112, second paragraph be reconsidered and withdrawn.

B. Claims Reciting "Heterologous to"

Claims 34, 62 and 72 have been rejected as allegedly being indefinite. The Examiner asserts that claims 34, 62 and 72 "encompass a protein further comprising a polypeptide sequence heterologous to the HPRBF19 cDNA, and a polypeptide is always heterologous to a cDNA." *See* Paper No. 7, page 9, section 7.2.

Accordingly, claims 34, 62 and 72 have been amended as recommended by the Examiner to obviate this rejection. In view of this amendment, Applicants respectfully request that the Examiner reconsider and withdraw the rejection to claims 34, 62 and 72 under 35 U.S.C. § 112, second paragraph.

C. Claims Reciting "Acceptable Carrier"

Claims 29, 35, 42, 49, 56, 63, 68 and 73 were rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. In particular, the Examiner alleges that said claims "encompass a composition comprising a protein and an 'acceptable' carrier, and it is not clear what the carrier is acceptable for." *See* Paper No. 7, page 10, section 7.3.

While Applicants respectfully disagree, claims 29, 35, 42, 49, 56, 63, 68 and 73 have been amended to eliminate the term "acceptable." Thus, the rejection under 35 U.S.C. § 112, second paragraph, has been obviated. Accordingly, Applicants respectfully request that the rejection be reconsidered and withdrawn.

VIII. Rejection of Claims Under 35 U.S.C. § 102(b)

Claims 11 and 16 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Tiranti *et al.* (1993) GENE 126:269-278. *See* Paper 12, page 10, section 8. Specifically, the Examiner asserts that Tiranti *et al.* discloses a protein which has 7 contiguous amino acids that are identical to amino acids 151-157 of SEQ ID NO:83. *See* Paper 12, page 10, lines 15-19.

Applicants respectfully disagree, but point out that claims 11 and 16 have been canceled, thus, rendering the rejection to said claims moot. Applicants respectfully request that the Examiner reconsider and withdraw the rejection to claims 11 and 16.

Conclusion

Applicants respectfully request the amendments and remarks of the present response be entered and made of record in the present application. In view of the foregoing amendment and remarks, Applicants believe they have fully addressed the Examiner's concerns and that this application is now in condition for allowance. An early notice to that effect is urged. The Examiner is invited to call the undersigned at the phone number provided below if any further action by Applicant would expedite the allowance of this application.

Applicants believe that there are no fees due in connection with the filing of this paper. However, should a fee be due, please charge the fees to our Deposit Account No. 08-3425. If a fee is required for an extension of time under 37 C.F.R. § 1.136, such an extension is requested and the appropriate fee should also be charged to our Deposit Account.

Respectfully submitted,

Date: April 1, 2003

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KKH/JMM/JL/SA/vr

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Ruben et al.

Attorney Docket: PZ035P1C1

Application No.: 09/895,298

Group Art Unit: 1646

Filed: July 2, 2001

Examiner: O'Hara, E.

For: Protein HPRBF19 (as amended)

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Changes to the application follow. Text that has been inserted is underlined and text that has been deleted is struck through.

In the Specification

Please replace the first paragraph on page 1 with the following paragraph:

This application is a continuation application of U.S. Application No. 09/591,316, filed June 9, 2000 (now abandoned), which is hereby incorporated by reference in its entirety, which is a continuation-in-part of, and claims benefit under 35 U.S.C. § 120 of copending PCT international patent application Serial No. PCT/US99/29950 filed December 16, 1999 (published in English), which is hereby incorporated by reference in its entirety, which claims benefit under 35 U.S.C. § 119(e) based on U.S. Provisional Application Nos. 60/113,006 filed December 18, 1998, and 60/112,809 filed December 17, 1998, which are hereby incorporated by reference in their entireties.

In the Claims

Please cancel claims 1-24 without prejudice or disclaimer.

The following claims have been amended:

29. (Once amended) A composition comprising the protein of claim 25 and ~~an acceptable~~ carrier.

34. (Once amended) The protein of claim 31 which further comprises a polypeptide sequence heterologous to the polypeptide encoded by HPRBF19 cDNA contained in ATCC Deposit No. 203517.

35. (Once amended) A composition comprising the protein of claim 31 and ~~an acceptable~~ carrier.

37. (Once amended) An isolated first polypeptide at least 90% identical to a second polypeptide consisting of amino acid residues 32 to 190 of SEQ ID NO:83, wherein said first polypeptide is capable of generating or selecting an antibody that ~~specifically~~ binds said second polypeptide.

42. (Once amended) A composition comprising the protein of claim 37 and ~~an acceptable~~ carrier.

44. (Once amended) An isolated first polypeptide at least 90% identical to a second polypeptide consisting of the secreted portion of the polypeptide encoded by the HPRBF19 cDNA contained in ATCC Deposit No. 203517, wherein said first polypeptide is capable of generating or selecting an antibody that ~~specifically~~ binds said second polypeptide.

49. (Once amended) A composition comprising the protein of claim 44 and ~~an acceptable~~ carrier.

51. (Once amended) An isolated first polypeptide at least 90% identical to a second polypeptide consisting of amino acid residues 1 to 190 of SEQ ID NO:83, wherein said first polypeptide is capable of generating or selecting an antibody that ~~specifically~~ binds said second polypeptide.

56. (Once amended) A composition comprising the protein of claim 51 and ~~an acceptable~~ carrier.

58. (Once amended) An isolated first polypeptide at least 90% identical to a second polypeptide consisting of the complete polypeptide encoded by the HPRBF19 cDNA contained in ATCC Deposit No. 203517, wherein said first polypeptide is capable of generating or selecting an antibody that ~~specifically~~ binds said second polypeptide.

62. (Once amended) The protein of claim 58 which further comprises a polypeptide sequence heterologous to the polypeptide encoded by HPRBF19 cDNA contained in ATCC Deposit No. 203517.

63. (Once amended) A composition comprising the protein of claim 58 and ~~an acceptable~~ carrier.

65. (Once amended) An isolated protein consisting of ~~comprising~~ at least 30 contiguous amino acid residues of amino acid residues 1 to 190 of SEQ ID NO:83.

66. (Once amended) The isolated protein of claim 65 which consists of ~~comprises~~ at least 50 contiguous amino acid residues of amino acid residues 1 to 190 of SEQ ID NO:83.

68. (Once amended) A composition comprising the protein of claim 65 and ~~an acceptable~~ carrier.

70. (Once amended) An isolated protein consisting of ~~comprising~~ at least 30 contiguous amino acid residues of the complete polypeptide encoded by the HPRBF19 cDNA contained in ATCC Deposit No. 203517.

71. (Once amended) The isolated protein of claim 70 which consists of ~~comprises~~ at least 50 contiguous amino acid residues of the complete polypeptide encoded by the HPRBF19 cDNA contained in ATCC Deposit No. 203517.

72. (Once amended) The protein of claim 70 which further comprises a polypeptide sequence heterologous to the polypeptide encoded by HPRBF19 cDNA contained in ATCC Deposit No. 203517.

73. (Once amended) A composition comprising the protein of claim 70 and ~~an acceptable~~ carrier.